

REMARKS

Applicant appreciates the Examiner's thorough consideration provided the present application. Claims 1-10 are now present in the application. Claims 1, 5 and 10 have been amended by the present amendment. Claims 1, 5 and 10 are independent. Reconsideration of this application, as amended, is respectfully requested.

Drawings

Figure 1 has been labeled "Conventional Art".

Rejections under 35 U.S.C. § 103(a)

Claims 1-3 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Applicant's admitted prior art (AAPA) in view of Suominen et al. This rejection is respectfully traversed.

Independent claim 1 has been amended to clarify that the second measuring signal of the demodulator is filtered in a measuring filter and the weighting filter function is formed by cascaded functions of the receive filter, the demodulator and the measuring filter, with the demodulator directly between the receive and measuring filters.

These features are supported at least by Fig. 2, which illustrates the weighting filter function is formed by cascaded functions of the receive filter 20, the demodulator 21, and the measuring filter 22, with the demodulator 21 directly between the receive and measuring filters 20 and 22. That is, the claimed invention does not merely directly cascade two filters, but includes a cascade of three stages (the receive filter 20, and the demodulator 21 followed by the measuring filter 22). As noted in the specification at page 2, lines 2-5, the demodulator 21

eliminates special signal errors such as mean frequency errors, initial phase errors, mean timing errors, etc. Therefore, the total transfer function of the present invention is not the pure cascading of two filter functions, but rather includes the cascading of three stages as noted above. The claimed cascading feature of the present invention is particularly advantageous in that the weighting filter 11 in Fig. 1 (AAPA) is not needed as well as the memory 9. Thus, the present invention advantageously provides a more simple design because the memory 9 and the weighting filter 11 are not needed.

The Office Action relies on Suominen et al. as disclosing that two filters can be cascaded into one filter by convolution of the impulse responses. However, combining Suominen et al. with AAPA would merely replace the weighting filter 11 with two directly cascaded filter functions. The combination of Suominen et al. and AAPA do not produce the cascaded functions of a receive filter, a demodulator, and a measuring filter, with the demodulator directly between the receive and measuring filters.

Accordingly, it is respectfully submitted independent claim 1 and each of the claims depending therefrom are allowable.

Claims 5-7, 9 and 10 stand rejected under 35 U.S.C. § 103(a) as unpatentable over AAPA in view of Nishimura and Suominen et al. This rejection is respectfully traversed.

Independent claims 5 and 10 have been amended in a similar fashion as discussed above with respect to independent claim 1. As noted above, the combination of AAPA and Suominen et al. do not teach or suggest a weighting filter function being formed by cascaded functions of a receive filter, a demodulator, and a measuring filter, with the demodulator directly between the receiving and measuring filters.

The Office Action relies on Nishimura as disclosing a demodulation unit. However, combining Nishimura with AAPA and Suominen et al. still does not produce the claimed cascading features of the present invention. That is, the demodulation unit in Nishimura would merely be at the output of the cascaded receive filter as shown in Figure 1 of AAPA.

Accordingly, it is respectfully submitted independent claims 5 and 10 and each of the claims depending therefrom are also allowable.

Further, it is respectfully submitted the other rejections under 35 U.S.C. § 103(a) noted in the Office Action have also been overcome as the claims rejected therein are dependent claims and the additional reference by Tsuda also does not teach or suggest the features recited in the corresponding independent claims.

In view of the above, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103 are respectfully requested.

CONCLUSION

All the stated grounds of rejection have been properly traversed and/or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider all presently pending rejections and that they be withdrawn.

It is believed that a full and complete response has been made to the Office Action, and that as such, the Examiner is respectfully requested to send the application to Issue.

In the event there are any matters remaining in this application, the Examiner is invited to contact David A. Bilodeau, Reg. No. 42,325, at (703) 205-8072 in the Washington, D.C. area.

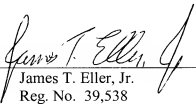
If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

Date: September 13, 2006

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By


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Attachment: Replacement Drawing Sheet